Sockeye salmon
Oncorhynchus nerka

STATUS
Endangered (57 FR 213; January 3, 1992)
Critical Habitat designated (59 FR 54840, November 2, 1994)

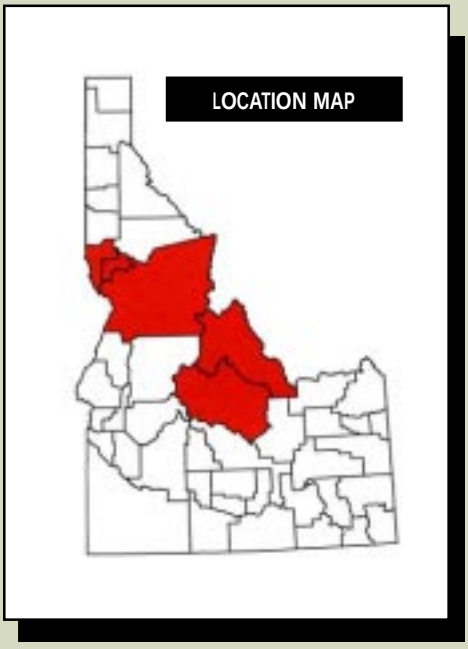
The National Marine Fisheries Service (NMFS) is the lead federal agency for anadromous fish.

DESCRIPTION
This salmon is also known as red salmon, redfish and blueback. It's coloration ranges from silvery with a back of metallic blue when it is in the ocean, to deep red with a green head when it is spawning. Adult sockeye average 18 to 24 inches and they usually weigh between three and six pounds. Sockeye salmon are typically "anadromous" (fish that migrate as juveniles from fresh water to the ocean and then return to spawn in fresh water), but two forms, the Kokanee and "residual" sockeye remain in fresh water to reproduce. The Kokanee resemble anadromous sockeye and have the same bright red coloration at spawning, but they are smaller in size. Kokanee are "resident" fish, or fish that live their entire lives only in fresh water. "Residual" sockeye may have anadromous parents, but do not necessarily migrate to the ocean. After a generation or two of entirely freshwater existence, the residual sockeye are able to produce anadromous smolts. These fish do not adopt strong spawning coloration, and they reproduce in fresh water without the traditional sockeye migratory journey.

Anadromous sockeye usually spawn in streams and lakes in the late summer and autumn. The young spend one to two years in lakes such as Redfish Lake in the Stanley basin in Idaho, then travel one of the longest of all salmon migrations — 897 miles down the Salmon to the Snake to the Columbia and finally, to the ocean. After another one to two years, adult sockeye repeat the journey home to spawn and begin the cycle again.

HISTORY
Snake River sockeye once thrived in five lakes in the Salmon River headwaters, in Big Payette Lake, Idaho, and in Wallawa Lake in Oregon. At one time, anglers in Idaho told tales of lake water appearing red each September during spawning season because there were so many sockeye!

DISTRIBUTION
In 1999, just seven sockeye returned to Redfish Lake to spawn. Native Kokanee are in the Columbia River drainage in Idaho, Washington, Oregon and British Columbia.



WHAT HAS THREATENED THIS SPECIES?
After eight hydropower dams on the Columbia and Snake rivers were finished in the 1970s, Snake River sockeye spawning runs declined dramatically. Human-caused disturbances such as pollution, habitat loss and degradation, overfishing, and loss of spawning and rearing areas have combined to harm the natural reproduction of the sockeye salmon.

WHAT IS BEING DONE TO HELP RECOVER THIS SPECIES?
Restoration of sockeye populations will depend on a combination of efforts, including flushing water over dams during seaward migration periods, improving habitat, increasing survival of juveniles migrating to the ocean and restricting harvest. Hatchery supplementation and transplantation from other runs will help to boost Redfish Lake numbers. Idaho's sockeye recovery plan also calls for restoring natural river flows to speed up downstream migration.

REFERENCES
National Marine Fisheries Service.1991.